(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 12 September 2002 (12.09.2002)

PCT

(10) International Publication Number WO 02/071311 A3

(51) International Patent Classification⁷: H04M 1/02, 1/725, H05B 33/14

(21) International Application Number: PCT/EP01/02571

(22) International Filing Date: 7 March 2001 (07.03.2001)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant and

- (72) Inventor: HALPERN, John, W. [GB/GB]; 15 Jordan Court, Ingram Crescent West, Hove, East Sussex BN3 5NU (GB).
- (74) Agents: HUGHES, Andrea, Michelle et al.; Frank B. Dehn & Co., 179 Queen Victoria Street, London EC4V 4EL (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility

model), DE, DK (utility model), DK, DM, DZ, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK (utility model), SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

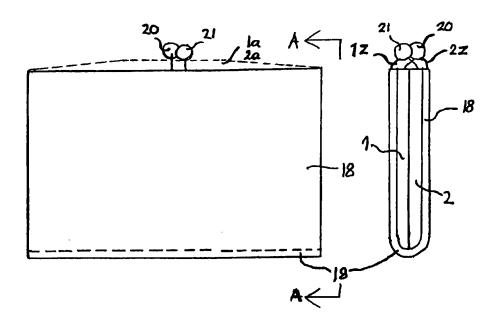
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- (88) Date of publication of the international search report: 21 November 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MOBILE PHONE COMMUNICATIONS SYSTEM WITH INCREASED FUNCTIONALITY



(57) Abstract: The invention relates to a mobile telephone and a smart card transaction system in combination, where the functionality of a mobile telephone is increased so that the phone can be used in a large range of transactions for which smart cards are normally used. The phone may also be provided with a slot to receive smart cards and re-charge them with funds for cashless transactions, by communicating with a bank account or the like.



02/071311 43

INTERNATIONAL SEARCH REPORT

PCT/EP 01/02571

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04M1/02 H04M H04M1/725 H05B33/14 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) HO4M HO5B Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) PAJ, EPO-Internal, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Category Citation of document, with indication, where appropriate, of the relevant passages Relevant to daim No. X PATENT ABSTRACTS OF JAPAN 1 vol. 018, no. 675 (E-1648), 20 December 1994 (1994-12-20) -& JP 06 268724 A (HITACHI LTD), 22 September 1994 (1994-09-22) abstract; figures 1,2,6,8 GB 2 314 179 A (PHILLIPPS JOHN QUENTIN) X 1 17 December 1997 (1997-12-17) abstract page 1, line 24-28 page 7, line 13 -page 8, line 6 figures 9-13 Y 2 X Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the *A* document defining the general state of the art which is not considered to be of particular relevance invention *E* earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 29. 08. 2002 15 August 2002 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Golzío, D Fax: (+31-70) 340-3016

INTERNATIONAL SEARCH REPORT

PCT/EP 01/02571

C /Cdmtlm	PARTY DOCUMENTO CONDUCTOR TO DE DE CALANT	
Category °	etion) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	10
Category	Charlott of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 348 521 A (HALPERN JOHN WOLFGANG) 4 October 2000 (2000-10-04) cited in the application abstract page 2, line 27-33 Amended claims 1 and 2 figure 1	1
Υ	US 5 181 025 A (FERGUSON DENNIS D ET AL) 19 January 1993 (1993-01-19) abstract column 2, line 15 -column 3, line 4 figures 1,2	2
X	WO 96 33594 A (CAMBRIDGE DISPLAY TECH ;MAY PAUL (GB); PICHLER KARL (GB)) 24 October 1996 (1996-10-24) the whole document	3
X	EP 0 384 829 A (FRANCE ETAT) 29 August 1990 (1990-08-29) the whole document	3
X	EP 0 820 178 A (MOTOROLA INC) 21 January 1998 (1998-01-21) abstract column 2, line 41-50 column 3, line 5 -column 6, line 44 figures 2-5	4-10
A	US 5 553 314 A (GRUBE GARY W ET AL) 3 September 1996 (1996-09-03) the whole document	4-10
A	GB 2 321 551 A (HALPERN JOHN WOLFGANG) 29 July 1998 (1998-07-29) cited in the application abstract page 3, line 21 -page 5, line 39 figures 1-8	4,5
A	GB 2 331 889 A (NIPPON ELECTRIC CO) 2 June 1999 (1999-06-02) abstract figures 1-4	6
A	WO 98 58509 A (BOUQUET HANSPETER ;RITTER RUDOLF (CH); EIDGENOESS PTT (CH); HEUTSC) 23 December 1998 (1998-12-23) abstract figures 1,2	7

International application No. PCT/EP 01/02571

INTERNATIONAL SEARCH REPORT

Box I	Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)						
This international Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:							
	Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:						
	Claims Nos.: because they relate to parts of the international Application that do not comply with the prescribed requirements to such an extent that no meaningful international Search can be carried out, specifically:						
3.	Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).						
Box II	Observations where unity of invention is lacking (Continuation of item 2 of first sheet)						
This inte	rnational Searching Authority found multiple inventions in this international application, as follows:						
	see additional sheet						
1. X	As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.						
2.	As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.						
	As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:						
4. 🗍	No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:						
Remark	on Protest The additional search fees were accompanied by the applicant's protest. X No protest accompanied the payment of additional search fees.						

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-2

A carrier for information and selective information exchange comprising two parts hingendly connected together by a flexible insulating material attached to both parts.

2. Claim: 3

A electronic display system utilizing a digital communication network and comprising an LED display wherein the crystal substance of the diode pixels is infused with photosensitive impurity elements capable of releasing fresh free electrons into the space charge of the crystal lowering the triggering voltage necessary to keep alight the diode pixels.

3. Claims: 4-10

A mobile telephone having means for receiving a smart card, means for communicating via the telephone network and means for transferring information received from the telephone network to the smart card.

INTERNATIONAL SEARCH REPORT

ional Application No PCT/EP 01/02571

						.,,, -
	atent document d in search report		Publication date		Patent family member(s)	Publication date
JP	06268724	Α	22-09-1994	NONE		
GB	2314179	Α	17-12-1997	US	6107988 A	22-08-2000
GB	2348521	A	04-10-2000	GB	2353874 A	07-03-2001
US	5181025	Α	19-01-1993	NONE		
WO	9633594	Α	24-10-1996	WO	9633594 A	
				GB US	2312326 A 6188175 B	
					01001/5	13-02-2001
EP	0384829	Α	29-08-1990	FR	2643488 A	
				DE	69010712 D	
				DE	69010712 T	
				EP	0384829 A	- -
	# 			JP	2273496 A	07-11-1990
EP	0820178	A	21-01-1998	US	5943624 A	24-08-1999
				EP	0820178 A	
				JP	10098542 A	14-04-1998
US	5553314	A	03-09-1996	NONE		
GB	2321551	A	29-07-1998	GB	2311399 A	
GB	2331889	A	02-06-1999	JP	11163989 A	18-06-1999
				AU	9422398 A	
WO	9858509	Α	23-12-1998	WO	9858509 A	1 23-12-1998
				AT	215291 T	
				AT	212774 T	
				AU	736350 B	
				AU	3022497 A	
				AU	739465 B	
				AU	5649598 A	04-01-1999
				WO	9858510 A	
				CN	1260939 T	19-07-2000
				DE	59706821 D	1 02-05-2002
				DE	59802969 D	
				DK	990355 T	
				DK	990356 T	
			•	EP	0990355 A	
				EP	0990356 A:	
				HU	0003157 A2	
				HU	0003565 A2	
				JP	2002511217 T	09-04-2002
				ĴΡ	2002510444 T	02-04-2002
				NO	996145 A	16-02-2000
				NO	996148 A	11-02-2000
				NZ	501858 A	28-09-2001